

REMARKS

This responds to the Office Action dated April 10, 2006.

Claims 1, 6-9, 16, 18, 19, 29-36, 38, and 44 have been amended herein. Claims 1-45 are pending in the application.

Objections to the Drawings

Formal drawings are submitted herewith to overcome the objections.

Objections to the Claims and Specification

Claim 1 and the specification have been objected to due to an informality. Applicant believes that the amendment to claim 1 herein has overcome the objection.

Rejections Under 35 U.S.C. § 112

Claims 1-15, 19-31, and 38-43 have been rejected under section 112 as being indefinite due to the use of the phrase “one or more shells defined around the mannequin.” The rejections are traversed and reconsideration is respectfully requested. The Office Action states that, while Figs. 6 and 8A show 2D curves, the mannequin is a 3D human figure. As is made clear in the specification, the shells referred to in the claims are constructs that serve to constrain a garment within a three-dimensional modeling environment so as to mimic the effect of another garment during a draping and collision simulation. Figs. 6 and 8A are intended as representational depictions of such shells in a front sectional view and a top sectional view, respectively.

Rejections Under 35 U.S.C. § 103

In the Office Action, claims 1-45 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Sakaguchi (U.S. Patent No. 6,310,627). The rejections are traversed and reconsideration is respectfully requested. Although certain of the pending claims have been amended herein, applicant reserves the right to file claims similar or identical to those claims before this amendment in one or more continuation or divisional applications.

As amended herein, claims 1-15, 18-31, and 33-45 recite methods and systems for

producing an image of a garment or a mannequin wearing a garment that involve rendering a two-dimensional garment image from a three-dimensional rendering frame, where the rendering frame is generated by a draping and collision simulation of a garment with a mannequin while constraining portions of the garment to reside within or outside of one or more shells defined around the mannequin in the rendering frame during the draping and collision simulation, wherein each shell is a three-dimensional construct designed to mimic the physical interaction of the garment with another garment. The Office Action points to the projection functions discussed in Sakaguchi that represent positional relationships between the triangular patches or lattice points that define the garment and figure model as at least suggesting “the shell defined around the mannequin.” Applicant finds no teaching or suggestion in Sakaguchi, however, of a shell defined around the mannequin where the shell is a three-dimensional construct designed to mimic the physical interaction of the garment with another garment during a draping and collision simulation. As pointed out in the specification and in response to previous office actions, the shells referred to in the present application act as surrogates for other garments in order to allow composite images of multiple garments to be rendered from separate rendering frames each containing only one garment. This allows a plurality of different versions of each garment image to be created and stored in a repository so that multiple garment images can be layered on a two-dimensional rendering of a mannequin, with the garments being rendered from rendering frames in an independent manner. Applicant finds no discussion in Sakaguchi that deals with the problems of producing images of a mannequin or model wearing multiple garments, much less any teaching or suggestion of the specific methods and systems for dealing with the problem as presently claimed. Applicant respectfully submits that claims 1-15, 18-31, and 33-45 patentably define over the teachings of Sakaguchi.

As amended herein, claims 16-18 and 32-33 recite methods or systems for generating images of a computer-simulated mannequin wearing a garment that involve generating a second rendering frame containing a second mannequin and a second garment as defined by selected parameter values that specify different dimensions from a first mannequin and/or first garment contained in a first rendering frame by shape blending corresponding objects of the first rendering frame, wherein the shape blending is performed by linearly combining parameters of

the first rendering frame and performing a partial draping and collision simulation. The Office Action points to the discussion of a system for animating images in Sakaguchi as suggesting the shape blending technique for generating a rendering frame as claimed by applicant. Applicant, however, asserts that animation *per se* is not shape blending. In any case, applicant finds no teaching or suggestion in Sakaguchi for employing an animation system to generate a mannequin or garment having different dimensions from a previously generated mannequin or garment as presently claimed. Applicant respectfully submits that claims 16-18 and 32-33 patentably define over Sakaguchi.

Applicant believes that, in view of the amendments contained herein and the remarks set forth above, the section 103 rejections have been overcome. With respect to the assertions of other claim limitations being taught or suggested by Sakaguchi, applicant generally reiterates the remarks made in response to previous office actions dealing with these issues. In particular, applicant finds no teaching or suggestion in Sakaguchi of a repository containing two-dimensional garment images that can be layered upon a mannequin to generate an image of the mannequin wearing multiple garments, of a method or system for generating such two-dimensional images that takes into account the interaction between multiple garments as discussed above, of different versions of garments for generating two-dimensional garment images that can be properly combined, of compositing rules or a compositing interpreter that define in what order specific garment images should be layered to thereby generate a composite two-dimensional image of the mannequin wearing the garments, or of combining separate rendering frames containing different garments into a composite two-dimensional image using Z-coordinates of the garments.

CONCLUSION

In view of the foregoing remarks, Applicant believes the claims are in condition for allowance and respectfully requests such action. Please charge any fees deemed necessary to Deposit Account 19-0743. The Examiner is invited to telephone the below-signed attorney at (847) 432-7302 to discuss any questions which may remain with respect to the present application.

Respectfully submitted,
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By their Representatives,

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CERTIFICATE UNDER 37 CFR § 1.8. The undersigned hereby certifies that this correspondence is being filed using the USPTO's electronic filing system EFS-Web, and is addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 10 day of August 2006.

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